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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/749,524
Filing Date: January 02, 2004
Appellant(s): BRACKETT ET AL.

John S. Golian
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 02/04/2008 appealing from the Office action mailed 10/02/2007.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

6891920	Minyard et al.	5-2005
2005/0050552	Fuller	3-2005
2002/0016718	Rothschild et al.	2-2002

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 101

The 35 U.S.C. 101 rejection to claim 28 has been withdrawn as indicated in the Examiner Interview Summary dated 11/14/2007.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-6, 8-13, and 28-29 are rejected under 35 U.S.C. 102(e) as being anticipated by Minyard et al. ('Minyard')(US 6,891,920 B1).

With respect to claim 1, Minyard teaches a computerized method for managing large studies (abstract) transferred from at least one acquisition device (102,106) to a study process server (104) in order to transfer the studies to at least one review station (110), the method comprising:

without having previously distributed the studies (patient/image information) to a review station (col. 3 line 18-20; i.e. preprocessing prior to initial review) Minyard

discloses preprocessing images prior to initial review), sorting each received study into at least one appropriate working set (col. 6 line 14-32; i.e. Minyard teaches acquiring images and indexing, or sorting, them into a database to suggest sorting the studies) and selecting at least one subset of the received studies from at least one working set (col. 3 line 54-64, i.e. retrieving an anticipated sequence for review); and

automatically distributing (col. 3 line 64-col. 4 line 6, col. 7 line 8-12) the at least one selected subset of studies (anticipated sequence of image information) to at least one review station (110) such that the at least one selected subset of studies is available on demand (col. 8 line 22; i.e. prompting for information) for review by a physician (col. 3 line 35-37 and line 56-58).

With respect to claim 2, Minyard teaches the method of claim 1, further comprising distributing the selected subset of studies to each review station (figure 1, elements 104 and 110).

With respect to claim 3, Minyard teaches the method of claim 1, further comprising implementing a predictive algorithm to identify a set of review stations and distributing the selected at least one subset of studies to the identified review stations (col. 3 line 50-col. 4 line 6, col. 7 line 5-12, and col. 8 line 8-29).

With respect to claim 4, Minyard teaches the method of claim 1, further comprising continuously monitoring a review station to determine if a distributed study

has been completed and removing the study from an associated working set after the study has been completed (col. 8 line 25-27 and col. 14 line 35-39; i.e. Minyard discloses monitoring acquisition and review processes).

With respect to claim 5, Minyard teaches the method of claim 4, further comprising deleting the completed study from some or all review stations (col. 14 lines 28-42; i.e. removing entire workflow).

With respect to claim 6, Minyard teaches the method of claim 1, further comprising after distributing the at least one selected subset of studies to at least one review station (col. 7 line 32-33), monitoring each review station for selected user activities and populating at least one monitored review station with additional studies (col. 14 line 38-41) from one or more relevant working sets upon detecting the detecting one of the selected user activities (monitoring in col. 8 line 25-30, and importing of col. 14 line 65 – col. 15 line 10).

With respect to claim 8, Minyard teaches a system for managing large studies transferred from at least one acquisition device to a study process server in order to transfer the studies to at least one review station, they system comprising one or more computer-readable media having a plurality of modules embodied thereon, the plurality of modules comprising:

a study sorting module (col. 6 line 14-32)) for sorting each study (col. 6 line 14-32; i.e. Minyard teaches acquiring images and indexing, or sorting, them into a database to suggest sorting the studies) received by the study process server (104) into at least one appropriate working set (106, 108);

a study control module (col. 3 line 51-53; i.e. an image system to prepare images for a review process) for automatically selecting at least one subset of studies (col. 3 lines 55-56; i.e. obtaining an anticipated sequence) from at least one working set (106, 108) without user input (col. 3 line 13-15); and

a study distribution module (104) for automatically distributing (col. 3 line 64-col. 4 line 6, col. 7 line 8-12) the selected at least one subset of studies (anticipated sequence of image information) to at least one selected review station (110 and col. 14 line 67-col. 15 line 1) such that the at least one selected subset of studies is available on demand (col. 8 line 22; i.e. prompting for information) for review by a physician (col. 3 line 35-37 and line 56-58).

With respect to claim 9, Minyard teaches the system of claim 8, wherein the study distribution module (104) distributes the selected subset of studies to each review station (figure 1, elements 104 and 110).

With respect to claim 10, Minyard teaches the system of claim 8, further comprising a predictive algorithm for identifying a set of review stations and distributing

the selected at least one subset of studies to the identified review stations (col. 3 line 50-col. 4 line 6, col. 7 line 5-12, and col. 8 line 8-29).

With respect to claim 11, Minyard teaches the system of claim 8, wherein the study control module continuously monitors a review station to determine if a distributed study has been completed and removing the study from an associated working set after the study has been completed (col. 8 line 25-27 and col. 14 line 35-39; i.e. Minyard discloses monitoring acquisition and review processes).

With respect to claim 12, Minyard teaches the system of claim 11, wherein the study control module includes controls for deleting the completed study from some or all review stations in response to determining that the study has been completed (col. 14 lines 28-42; i.e. removing entire workflow).

With respect to claim 13, Minyard teaches the system of claim 8, wherein the study control module includes controls for monitoring each review station (110) for selected user activities after the study distribution module (104) has distributed the selected at least one subset of studies to at least one selected review station (col. 7 line 32-33); and

wherein the study distribution module (104) populates at least one monitored review station with additional at least one relevant working sets upon detecting the

selected user activities (monitoring in col. 8 line 25-30, and importing of col. 14 line 65 – col. 15 line 10).

With respect to claim 28, Minyard teaches one or more computer-readable media embodying computer useable instructions for performing a computerized method for managing the transfer of studies to a plurality of review stations, wherein the studies are grouped into a plurality of working sets, the method comprising:

automatically selecting (col. 3 line 54-64) at least one subset of studies from at least one working set (col. 3 line 54-64, i.e. retrieving an anticipated sequence from the database for review); and

automatically distributing (col. 3 line 64-col. 4 line 6, col. 7 line 8-12) at least one subset of studies (anticipated sequence of image information) to each of the plurality of review stations (110) such that at least one subset of studies is available on demand (col. 8 line 22; i.e. prompting for information) for review by a user at each of the plurality of review stations (col. 3 line 35-37 and line 56-58 and col. 14 line 67-15 line 1 and 110 of figure 1);

monitoring the plurality of review stations for one or more selected user activities (monitoring acquisition and review processes in col. 8 line 25-30, and importing of col. 14 line 65 – col. 15 line 10); and

upon detecting at least one of the one or more selected user activities (i.e. receiving a prompt) at a review station selected by a user (col. 14 line 67-15 line 1),

transferring additional studies to the selected review station (col. 14 line 35-41; i.e. starting another workflow sequence).

With respect to claim 29, Minyard teaches the one or more computer-readable media of claim 28, wherein automatically selecting (col. 3 line 54-64) at least on subset of studies from at least one working set (col. 3 line 54-64, i.e. retrieving an anticipated sequence from the database for review) comprises automatically selecting at least one subset of studies from at least one working (106) set comprises automatically selecting at least one subset of studies from each of the plurality of working sets (106, 108) to provide a plurality of subsets of studies (i.e. patient information), and wherein automatically distributing (col. 3 line 64-col. 4 line 6, col. 7 line 8-12) at least one subset of studies to each of the plurality of review stations comprises automatically distributing (col. 3 line 64-col. 4 line 6, col. 7 line 8-12) the plurality of subsets of studies to each of the plurality of review stations (110).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 7, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Minyard as applied to claims 1-6, 8-13, and 28-29 above in view of Fuller (US 2005/0050552 A1).

With respect to claims 7 and 14, Minyard fails to teach monitoring each review station for a low buffer threshold and re-populating any review station reaching the low buffer threshold with at least one additional subset of studies.

Fuller, however, teaches this limitation as checking the amount of data in a data queue, and if the amount is lower than a pre-selected threshold, the queue is populated with new data (0019 and figure 3) to ensure requested data are available for immediate delivery.

It would have been obvious to one of ordinary skill in the data processing art at the time of the present invention to combine the teachings of the cited references because Fuller's system would have provided Minyard's invention with enhancing the likelihood that the requested data are available for immediate delivery (Fuller, 0004). Minyard could have used such a method to further reduce workflow delay (Minyard, abstract).

Claim 14 contains essentially the same subject matter as claim 7 and therefore the rejection of claim 7 applies equally well to claim 14.

Claims 15-20 and 22-27, are rejected under 35 U.S.C. 103(a) as being unpatentable over Minyard in view of Rothschild et al. ('Rothschild') (US 2002/0016718 A1).

With respect to claim 15 and similar claim 27, Minyard teaches a computerized method for managing studies transferred from at least one acquisition device to a study process server in order to transfer the studies to at least one review station, the method comprising:

automatically transferring (col. 3 line 65-col. 4 line 3) a selected subset of the existing studies (anticipated sequence; col. 3 line 55-60) to at least one review station (110) such that the at least one selected subset of studies (anticipated sequence; col. 3 line 55-60) is available for review (col. 4 line 4-6, and col. 8 line 20-22; i.e. Minyard discloses transferring image information to store upon receiving a prompt);

Minyard does not expressly teach monitoring the at least one review station for a login and populating the at least one review station with additional studies from at least one relevant working set upon detecting the login.

Rothschild, however, teaches monitoring each selected review station for a login as a remote workstation polling for data upon the occurrence of a predetermined triggering event (i.e. a log in event) for detecting a log in (0085-0086).

It would have been obvious to one of ordinary skill in the data processing art at the time of the present invention to combine the teachings of the cited references because Rothschild would have allowed Minyard's invention to detect a log in. As only

authorized users may use Minyard's system (col. 15 line 5-10, Minyard), Rothschild's method to detect a log in would have been beneficial for monitoring acquisition and review processes in a review session for a physician (col. 3 line 55-60, Minyard) to reduce workflow delay. Further, detecting a login from Rothschild would make obvious to populate the review station with additional studies from at least one relevant working set for the benefit of making image information available (col. 3 line 7-10, Minyard) for review and thus reducing workflow delay as Minyard is concerned with.

Claim 27 contains essentially the same subject matter (i.e. detecting a login) and therefore the rejection of claim 15 applies equally well to this claim.

With respect to claim 16, Minyard teaches the method of claim 15, further comprising selected all review stations distributing the selected subset of studies to all review stations (figure 1, elements 104 and 110).

With respect to claim 17, Minyard teaches the method of claim 15, further comprising implementing a predictive algorithm to identify a set of review stations and distributing the selected subset of studies to the identified review stations (col. 3 line 50-col.4 line 6, col. 7 line 5-12, and col. 8 line 8-29).

With respect to claim 18, Minyard teaches the method of claim 15, further comprising continuously monitoring the populated review stations to determine if a distributed study has been completed (col. 8 line 25-27 and col. 14 line 35-39).

With respect to claim 19, Minyard teaches the method of claim 18, further comprising and deleting the study from the populated review stations after the study has been completed (col. 14 lines 28-41).

With respect to claim 20, the combination of Minyard and Fuller fail to teach monitoring each review station for a login and populating each monitored review station with studies from a relevant working set upon detecting the login.

Rothschild, however, teaches monitoring each review station for a login and populating each monitored review station with studies from a relevant working set upon detecting the login (0085-0086) for detecting a log in and polling for data.

It would have been obvious to one of ordinary skill in the data processing art at the time of the present invention to combine the teachings of the cited references because Rothschild would have allowed Minyard/Fuller's invention to detect a log in. As only authorized users may use Minyard's system (col. 15 line 5-10, Minyard), Rothschild's method to detect a log in would have been beneficial for monitoring acquisition and review processes in a review session for a physician (col. 3 line 55-60, Minyard).

With respect to claim 22, Minyard teaches a system for managing studies transferred from at least one acquisition device to a study process server in order to transfer the studies to at least one review station, the system comprising one or more

computer-readable media having a plurality of modules embodied thereon, the modules comprising:

a study distribution module (104) for automatically transferring (col. 3 line 65-col. 4 line 3) a selected subset of the studies to at least one review station such that the selected subset of the existing studies (anticipated sequence; col. 3 line 55-60) is available for review; and

a study control module for monitoring each review station (col. 8 line 25-27 and col. 14 line 35-39; i.e. Minyard discloses monitoring acquisition and review processes),

Minyard does not expressly teach monitoring the at least one review station for a login and populating the review stations with additional studies from at least one relevant working set upon detection of the login.

Rothschild, however, teaches monitoring each selected review station for a login as a remote workstation polling for data upon the occurrence of a predetermined triggering event (i.e. a log in event) for detecting a log in (0085-0086).

It would have been obvious to one of ordinary skill in the data processing art at the time of the present invention to combine the teachings of the cited references because Rothschild would have allowed Minyard's invention to detect a log in. As only authorized users may use Minyard's system (col. 15 line 5-10, Minyard), Rothschild's method to detect a log in would have been beneficial for monitoring acquisition and review processes in a review session for a physician (col. 3 line 55-60, Minyard) to reduce workflow delay. Further, detecting a login from Rothschild would make obvious for Minyard to populate the review station with additional studies from at least one

relevant working set for the benefit of making image information available (col. 3 line 7-10, Minyard) for review and thus reducing workflow delay as Minyard is concerned with.

With respect to claim 23, Minyard teaches the system of claim 22, wherein the study control module further comprises controls for selecting all review stations and the study distribution module distributes the selected subset of studies to all review stations (figure 1, elements 104 and 110).

With respect to claim 24, Minyard teaches the system of claim 22, further comprising a predictive algorithm for identifying a set of review stations, such that the study distribution model distributes the selected subset of studies to the identified review stations (col. 3 line 50-col.4 line 6, col. 7 line 5-12, and col. 8 line 8-29).

With respect to claim 25, Minyard teaches the system of claim 22, wherein the study control module further comprises controls for continuously monitoring the populated review stations to determine if a distributed study has been completed (col. 8 line 25-27 and col. 14 line 35-39).

With respect to claim 26, Minyard teaches the system of claim 25, wherein the study control module further comprises controls for deleting the study from the populated review stations after the study has been completed (col. 14 lines 28-41).

Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Minyard and Rothschild as applied to claims 15-20 and 22-27 above and further in view of Fuller.

With respect to claim 21, the combination of Minyard and Rothschild fail to expressly teach monitoring each review station for a low buffer threshold and re-populating any review station reaching the low buffer threshold.

Fuller, however, teaches monitoring each review station for a low buffer threshold and re-populating any review station reaching the low buffer threshold as checking the amount of data in a data queue, and if the amount is lower than a pre-selected threshold, the queue is populated with new data (0019 and figure 3) to ensure requested data are available for immediate delivery.

It would have been obvious to one of ordinary skill in the data processing art at the time of the present invention to combine the teachings of the cited references because Fuller's system would have provided Minyard's invention with enhancing the likelihood that the requested data are available for immediate delivery (Fuller, 0004). Minyard could have used such a method to further reduce workflow delay (Minyard, abstract).

(10) Response to Argument

Appellant's arguments filed in the Appeal Brief ('Brief herein) dated 2/4/2008 have been fully considered but they are not persuasive.

Examiner's Response to Argument A (pages 7-14 of the Brief).

In respect to argument section 1) of argument A (page 8-10 of the Brief) pertaining to claims 1-6, the Appellant argues that the Minyard reference fails to describe "without having previously distributed the studies to a review station, sorting each received study into at least one appropriate working set and selecting at least one subset of the received studies from at least one working set." The Examiner disagrees given the following:

The Examiner submits that Minyard teaches a method and system for enhancing the workflow processes of acquiring and distributing digital image information (abstract, Minyard). Upon acquiring the image information, it is indexed (in other words, sorted) to patient information that is organized in tables of a database (correlating to Appellant's working set because it contains information regarding the patient and studies; col. 6 lines 26-33). Therefore, it is described by Minyard that as images (which are analogous to studies, see Minyard, col. 6 line 28) are acquired, they are stored according to the organized patient data (i.e. sorted to the corresponding patient). Further, the images are acquired from acquisition stations 102 and subsequently indexed to patient information without user interaction. Put another way, the image data is acquired and stored without being distributed to review stations 110. See figure 1 and col. 6 lines 14-32 wherein Minyard teaches acquiring and storing image information. Furthermore in column 7 lines 44-46, Minyard discloses automatically, upon receiving an acquired image, storing that image (i.e. before it is distributed to a review station).

The Appellant further argues that Minyard does not teach selecting a subset of studies from a working set prior to distributing the studies to a review station (page 9 of the Brief). The Examiner disagrees because as cited in the rejection above, Minyard teaches determining an anticipated review session by a physician (col. 3 line 53-55). The Appellant argues that a sequence for an image review session as in Minyard is not selecting a subset of studies from a working set as in claim 1. The Examiner disagrees because a sequence is selected for a particular physician (col. 3 line 60, Minyard). Minyard further states *obtaining* image information corresponding to the anticipated sequence and transferring the identified image information to a memory location for rapid display at a selected review station (Minyard, col. 3 line 55-58). One way of knowing what sequence to anticipate for a physician may be to use predictive criteria to identify the image information (Minyard, col. 3 line 60-64). The predictive criteria, or predictive logic (see also Minyard, col. 7 line 9-12) is used to predictively retrieve images from the repository for prompt display during a review session. Put another way, Minyard obtains and retrieves image information (i.e. a subset) from an image repository (i.e. containing the working set) and transfers the image information (as an anticipated sequence) to a review station for review by a particular physician. Moreover, as can be reasonably interpreted, a "subset" can be broadly defined as less than the whole. Because Minyard obtains a sequence of images and transfers the images identified in that sequence to a physician, and that the sequence can be interpreted to include at least one image, Minyard describes selecting a subset. The Examiner submits that in at least these citations, an anticipated sequence of obtained

images transferred to a review station sufficiently describes a "subset" of at least one working set.

Additionally, Appellant argues (page 10, first full paragraph of the Brief) that Minyard fails to describe "automatically distributing the at least one selected subset of studies to at least one review station such that the at least one selected subset of studies is available on demand for review by a physician. The Examiner submits that as noted in the above argument response, Minyard describes selecting a subset from a working set (i.e. obtaining images for an anticipated sequence from a database of images). Further, Minyard teaches [subsequently after determining the sequence] the identified image information (i.e. the selected subset) are thus transferred to a review platform so that they are available for rapid display (col. 4 line 1-5). Therefore, because the anticipated sequence is transferred to a review station (for example, storing the information in the cache of an image review platform so that it is essentially "primed") so that it can be available for rapid display, Minyard discloses the claimed distribution of at least one selected subset of studies. Further, by Minyard making the anticipated sequence (i.e. subset) available for rapid display, they describe making the selected subset available on demand for review by a physician as an initial process before the physician reviews the images in the sequence.

In respect to argument section 2) of Argument A (page 11-13 of the Brief) pertaining to claims 8-13, the Appellant argues that the Minyard reference fails to

describe a study control module for automatically selecting at least one subset of studies from at least one working set without user input as found in claim 8.

As noted above, the Examiner submits that Minyard describes automatically selecting a subset of studies from a working set by obtaining images through predictive logic (found in col. 3 line 64 as predictive criteria and further explained in col. 7 line 9-12) for an anticipated sequence (i.e. subset) from a repository of images (i.e. working set). This anticipated sequence may be determined based on a review protocol for a particular physician (see Minyard, col. 3 lines 50-65). Further, Minyard teaches after determining the anticipated sequence, the identified image information (in that sequence) is transferred to an image review platform so that it is available for rapid display (see Minyard, col. 3 line 66-col. 4 line 6).

In response to Appellant's argument (page 12, first full paragraph of the Brief) that Minyard does not teach a study control module for automatically selecting at least one subset of studies from at least one working set without user input, the Examiner disagrees because as noted in the rejection above, Minyard teaches this feature as an image system to prepare images for a review process (col. 3 line 51-53). More specifically, as Minyard's system uses predictive logic to anticipate a sequence for obtaining images for review, that this predictive logic may be seen as the claimed study control module. That is, the predictive logic of Minyard performs the same function as the study control module, because just as the study control module, Minyard's predictive logic automatically selects (i.e. predicts via predictive logic) an anticipated sequence for a physician (i.e. a subset) from an image repository (working set) and then transfers the

identified information to an image review station. The transfer of this sequence of images further describes the "automatically distributing the selected at least one subset of the studies..." found in claim 8 (and argued in the second full paragraph, page 12 of the Brief).

Further, in accordance with figure 1 of Minyard, the server (104) is seen to equate to the claimed "study distribution module." The rationale behind this assertion is that because Minyard's image acquisition and review system (figure 1) acquires image information from acquisition stations (102) and in processing, transfers the information to review stations (110) that logically, server (104) is used to transfer (i.e. distribute) the selected images in an anticipated sequence.

In respect to argument section 3) of Argument A (page 13-15 of the Brief) pertaining to claims 28-29, the Appellant argues that the Minyard reference fails to describe the transfer of studies to a plurality of review stations wherein the studies are grouped into a plurality of working sets. The Examiner submits, that as noted above, the image and patient information repositories (106, 108) describe the claimed working set as the data found in these repositories are actively "worked on" and processed in order to serve (e.g. distribute via server 104, figure 1) an anticipated sequence to a physician for review. Furthermore, Minyard describes a plurality of working sets when they teach their system to indexing the images to patient information and that the information is organized in tables (see Minyard, col. 6 lines 23-28). In other words, the Examiner submits that Minyard acquires images and indexes those images according to

a certain patient. Therefore a plurality of patients that have respective associated images would be analogous to studies (or images reviewed by a physician) grouped into a plurality of working sets. The Examiner submits that each patient with their associated images represent a plurality of working sets.

The Appellant also argues that Minyard does not teach an approach in which a subset of studies are selected from a working set and then distributed to each of a number of review stations such that the subset of studies is available at each review station for review by a user (see Brief, bottom of page 13 to top of page 14). The Examiner disagrees because in accordance with figure 1, Minyard shows an image acquisition and review system with a plurality of review stations 110. In col. 4 line 1-5, Minyard teaches transferring images to an image review platform (i.e. drawing reference 110 of figure 1). Because Minyard discloses multiple review stations as reference 110, it is therefore seen that each review station receives the anticipated sequence (or "subset" as described above) so that a user of each of the review stations 110 can review the images. Furthermore, Minyard also describes distributing a subset to each of a number of review stations when they teach transferring the identified images (in a sequence) so that they are available on the display terminal or *terminals* of the review equipment (see Minyard, col. 4 lines 1-6).

The Appellant argues on page 14 (second full paragraph) of the Brief that Minyard does not describe monitoring the plurality of review stations for one or more selected user activities and upon detecting at least on e of the one or more selected

activities at a review stations selected by a user, transferring additional studies to the selected review station. The Examiner disagrees because as noted above, Minyard teaches predictively obtaining an anticipated sequence (or a "subset") from an image repository (or "working set"). Minyard further teaches transferring the identified images to an image review platform (Minyard, col. 3 line 66- col. 4 line 3). These images are retrieved predictively as a background task for prompt display (Minyard, col. 7 line 10-12). Therefore it is seen that a subset of the images (or an obtained anticipated sequence) is retrieved and stored at the review station so that it is available for display.

Further, Minyard's system monitors the plurality of review stations for one or more selected user activities in that 1) the system awaits to receive a prompt from the user in which then it the image for display and/or 2) the system gives a user an import button (col. 15 line 5-10) to import results of a work list (i.e. containing images; see Minyard, col. 13 line 61-63) search and thus describes transferring *additional* studies (images) upon detecting a user activity.

Examiner's Response to Argument B (pages 15-18 of the Brief).

At the top of page 16 in the Brief, Appellant argues (in respect to claims 7 and 14) that the Fuller Reference does not discuss monitoring a review station for a low buffer threshold and re-populating any review station reaching the low buffer threshold with at least one additional subset of studies.

The Examiner disagrees because Fuller teaches checking a data queue from time to time (Fuller, 0019, line 8 and step 96 of figure 3). Here, the "checking" equates

to the claimed "monitoring" and the data queue represents a component of a computer system (Fuller, figure 1) which may be an image review station found in Minyard. Fuller further teaches that if the amount of data found in the data queue is too low (e.g. lower than a pre-selected threshold, then more data is put into the queue (see Fuller, second half of paragraph 0019).

The Examiner submits that as Minyard and Fuller are in the same field of endeavor (i.e. making data available for immediate delivery, Fuller, 0004, line 6-7). The Examiner submits that it would have been obvious for one of ordinary skill in the art to combine Fuller's teachings of monitoring the level of data in a data queue (or in Minyard's case, monitoring the cache that stores the image data which is found in col. 4 line 1-3) so that the likelihood of requested data would be immediately available.

The Appellant argues that fuller is concerned with delivering data from an application to a device driver which clearly does not meet the limitations found in claims 7 and 14. The Examiner disagrees because the device driver of Fuller retrieves its data from a network, such as the internet. See Fuller, paragraph 0017 wherein it is taught that "…in the embodiment illustrated in FIG. 2 the driver 80 may receive the data from a network 82, such as the Internet." Therefore, Fuller is concerned with delivering data from a network source (in contrast to Appellant's argument at page 17, last paragraph in the Brief) and populating a data queue with that data upon determining that is has breached a low-threshold value. In other words, a computer in Fuller is populated with data from a network as it is needed which would be useful to Minyard because they are interested in obtaining a sequence of data (or a subset) to have readily available to a

user (such a need is realized in Minyard at col. 3 line 67-col. 4 line 6). Moreover, by having the sequence readily available with the methods disclosed in Fuller, Minyard would have been able to further reduce loading and delay times associated with large image files (see Minyard's concern at col. 4 line 5-6) and thus provided is motivation for the combination.

Examiner's Response to Argument C (pages 18-21 of the Brief).

Specifically, in the first full paragraph of page 19 of the Brief, Appellant argues (section 1 of Argument C) that Minyard and the Rothschild reference alone or in combination do not teach populating a review station with additional studies from a working set upon detecting a login.

The Examiner submits that as noted above, that Minyard describes automatically selecting a subset of studies from a working set by obtaining images through predictive logic (found in col. 3 line 64 as predictive criteria and further explained in col. 7 line9-12) for an anticipated sequence (i.e. subset) from a repository of images (i.e. working set). This anticipated sequence may be determined based on a review protocol for a particular physician (see Minyard, col. 3 lines 50-65). Further, Minyard teaches after determining the anticipated sequence, the identified image information (in that sequence) is transferred to an image review platform so that it is available for rapid display (see Minyard, col. 3 line 66-col. 4 line 6). In particular, Minyard teaches transferring the images to a review station (i.e. being pre-populated) so that they are

available for rapid display (col. 4 line 1-6), and further that these images may be automatically retrieved or otherwise stored in caches at station 110 (col. 7 line 31-33).

The Examiner also submits that Rothschild teaches a polling system within a remote work station or viewer that polls data upon a predetermined triggering event. Such a predetermined triggering event may be a log in event (see Rothschild, paragraph 0085). In other words, Rothschild teaches a remote system that polls (or requests) data when a log in is detected. Minyard teaches monitoring user activities at a review station (e.g. using logic to monitor acquisition and review processes, col. 8 lines 25-29). Minyard fails to explicitly teach detecting a login at a review station. Rothschild, however, teaches monitoring for a log in activity (paragraph 0085). That is, Rothschild discloses polling for data upon a triggering event (such as a log in). It would have been beneficial for Minyard to poll for data (i.e. additional studies) upon detection of a login for improvements in a workflow and thus minimizing load time and delay associated with retrieving images.

Furthermore, it would seem logical that since Minyard teaches storing large image files in cache memory of a review station (Minyard, col. 4 line) that Rothschild's method of polling for data while detecting a user activity (e.g. a log in) would be useful to Minyard. As well known in the art, cache memory is usually a small, temporary storage for data. In light of the small storage capacity associated with cache memories, the Examiner submits that Minyard's review platform would only be able to hold so many image files until new ones are needed (e.g. more images to be reviewed in a sequence). It would have been useful to Minyard to use Rothschild's polling system to

obtain additional data so that ultimately all the images in the obtained anticipated sequence could be viewed by a user (i.e. physician).

In respect to argument section 2) of Argument C (page 11-13 of the Brief), Appellants argue (page 21 of the Brief) that Minyard and Rothschild fail to teach or suggest a system that includes both a study distribution module and a study control module to first prime a review station with a selected subset of studies and then populates the review station with additional studies from a working set upon detecting a login at the review station. The Examiner submits that as noted above, Minyard teaches the selection of a subset. Further, the Examiner submits that as noted in response to claim 8, Minyard teaches the study distribution module as a server. Specifically, Minyard's server 104 acts as the claimed study distribution module because it essentially distributes the studies (or images) to the review stations (see figure 2, Minyard). Furthermore, Minyard teaches using logic that monitors acquisition and review processes of the user, and therefore monitors user activity. Although Minyard does not teach explicitly monitoring for a login, Rothschild, as seen above, teaches this feature. That is, upon occurrence of a log in, Rothschild's system polls for data (Rothschild, paragraph 0085).

The Examiner submits that because Minyard's system predicts and anticipates a sequence to be reviewed and then transfers the sequence to be available for display, that this describes the "priming" of a review station that Appellant is concerned with. This is because the obtaining of the sequence and transferring of the sequence is

accomplished before review by a physician (i.e. because it is anticipated and preformed predictively).

Examiner's Response to Argument D (page 22 of the Brief).

Appellant argues that there is no suggestion or motivation to combine the Minyard, Rothschild, and Fuller references. The Examiner submits that in the foregoing, the Minyard, Rothschild, and Fuller references teach alone and/or in combination the recited elements of the present invention. Further, the Examiner submits that the system of selecting a subset of studies (images) and distributing that subset, as Minyard teaches in combination with retrieving additional data, as provided by Fuller, and further the polling for additional data as given by Rothschild, would yield a combined system to efficiently retrieve and display images for a review session. Such a system would have notable benefits such as a reduced delay for retrieving and displaying images. Further, the combination of the prior art would give a physician of Minyard a way to have images readily available for review.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

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